



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,241	09/30/2003	Evon Llewellyn Crooks	030627/267417	3499

826 7590 11/16/2005

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

LYLES IRVING, CARMEN V

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,241

Applicant(s)

CROOKS ET AL.

Examiner

Carmen Lyles-Irving

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5 pages</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 2, 3, 5-8 and 10-15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arterbery et al (U.S. Patent No. 5,746,230) in view of Deutsch (U.S. Patent No. 4,971,078). Regarding claim 1, Arterbery teaches a cigarette comprising a tobacco rod and a filter element connected to the tobacco rod, said filter element having an end proximal to the tobacco rod and an end distal from the tobacco rod, wherein said filter element comprises a first longitudinal extending section of the filter material positioned at the end of the filter element proximal to the tobacco rod; a second longitudinally extending section of filter material positioned at the end of the filter element distal from the tobacco rod and spaced apart from said first section of filter material, the two sections of filter material defining a compartment therebetween; and an adsorbent material, i.e. charcoal, contained within at least a portion of said compartment (column 1, lines 21-24). Arterbery fails to teach that at least one channel extends through said first section of filter material, said channel being adapted for passage of mainstream smoke between said tobacco and said compartment. However, Deutsch teaches the at least one channel extending through said first section of filter material, said channel being adapted for passage of mainstream smoke between said

Art Unit: 1731

tobacco rod and said compartment (column 2, lines 52-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the plug-space-plug filter of Arterbery with the filter containing flavored hollow fibers as it is known to provide different plugs differing in characteristics (column 1, lines 24-26).

Accordingly, claim 1 is rejected.

Regarding claim 2, Deutsch teaches at least one channel comprises a single channel proximal to the central axis of said first section of said filter material (Figure 3).

Accordingly, claim 2 is rejected.

Regarding claim 3, Deutsch teaches at least one channel comprises a plurality of channels (Fig. 4a). Accordingly, claim 3 is rejected.

Regarding claim 5, Deutsch teaches that the plurality of channels are spaced along the periphery of the first section of said filter material (Fig. 4a). Accordingly, claim 5 is rejected.

Regarding claim 6, Deutsch teaches at least one channel has a cross-sectional area of about 0.1 to about 50 mm² (column 2, lines 14-16). Accordingly, claim 6 is rejected.

Regarding claim 7, Deutsch teaches at least one channel has a cross-sectional area of about 0.5 to about 15 mm² (column 2, lines 14-16). Accordingly, claim 7 is rejected.

Regarding claim 8, Arterbery teaches that the first section of filter material and said second section of filter material are cellulose acetate tow (column 1, lines 38-41). Accordingly, claim 8 is rejected.

Regarding claims 10 and 11, due to a lack of criticality and unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an overall length of the filter length of a length necessary to achieve the desired product. Accordingly, claims 10 and 11 are rejected.

Regarding claims 12 and 13, due to a lack to criticality and unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a filter with lengths of the first and the second sections necessary to achieve the desired end product. Accordingly, claims 12 and 13 are rejected.

Regarding claims 14 and 15, due to a lack to criticality and unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a filter where the length of the compartment located between the first filter section and the second filter section is of a length to hold sufficient adsorbent to allow for the maximum filtration possible. Accordingly, claims 14 and 15 are rejected.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arterbery and Deutsch, as applied to claim 1 above, and further in view of Keith et al (U.S. Patent No. 3,460,543). Arterbery and Deutsch fail to teach said first section of filter and said second section of filter material comprise plasticized cellulose acetate tow. However, Keith teaches it is conventional in the art for filter plug to composed of plasticized cellulose acetate tow. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Arterbery and Deutsch with the teaching of Keith to produce a filter with adsorbent materials to remove unwanted

Art Unit: 1731

compositions from cigarette smoke (column 6, lines 30-35). Accordingly, claim 9 is rejected.

Claims 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable Arterbery and Deutsch, as applied to claim 1 above, and further in view of Wise et al (U.S. Patent No. 3,658,069). Regarding claims 16, 17 and 19, Arterbury teaches the adsorbent is charcoal (carbon). Arterbery fails to teach that the charcoal is activated. However, Wise teaches it is conventional in the art to add activated charcoal (carbon) components in granular form to remove carbon monoxide in tobacco smoke (column 49-52 and column 2, lines 16-17). It would have been obvious to one of ordinary skill in the art at the time invention to combine the teachings of Arterbery and Deutsch with the teachings of Wise to provide such filters having multiple plugs abutting one another, the different plugs differing in density or other characteristics (column 1, lines 24-27). Accordingly, claims 16, 17 and 19 are rejected.

Regarding claim 20, Wise shows it is conventional in the art to use an adsorbent that has a particle size of about 8x16 mesh to about 30x70 mesh (column 2, lines 15-19). Accordingly, claim 20 is rejected.

Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable Arterbery, Deutsch and Wise et al as applied to claims 16 and 17 above, and further in view of Frund (U.S. Patent No. 5,714,126). Arterbery, Deutsch and Wise fail to teach that the activated carbon has an activity of about 60 to about 150 Carbon Tetrachloride Activity. However, Frund teaches the use of an activated carbon that has a carbon tetrachloride activity of at least 95. It would have been obvious to one of ordinary skill in the art at the

Art Unit: 1731

time of the invention to combine the teachings of Arterbery, Deutsch and Wise with the teachings of Frund to produce a filter capable of filtering toxic agents. Accordingly, claim 18 is rejected.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arterbery et al (U.S. Patent No. 5,746,230) in view of Deutsch (U.S. Patent No. 4,971,078). Arterbery teaches a cigarette comprising a tobacco rod and a filter element connected to the tobacco rod, said filter element having an end proximal to the tobacco rod and an end distal from the tobacco rod, wherein said filter element comprises a first longitudinal extending section of the filter material positioned at the end of the filter element proximal to the tobacco rod; a second longitudinally extending section of filter material positioned at the end of the filter element distal from the tobacco rod and spaced apart from said first section of filter material, the two sections of filter material defining a compartment therebetween; and an adsorbent material, i.e. charcoal, contained within at least a portion of said compartment (column 1, lines 21-24).

Arterbery fails to teach that at least one channel extends through said first section of filter material, said channel being adapted for passage of mainstream smoke between said tobacco and said compartment and that said channel has a cross-sectional area of about 0.1 to about 50 mm². However, Deutsch teaches the at least one channel extending through said first section of filter material, said channel being adapted for passage of mainstream smoke between said tobacco rod and said compartment (column 2, lines 52-54). Deutsch also teaches at least one channel has a cross-sectional area of about 0.1 to about 50 mm² (column 2, lines 14-16). It would have

Art Unit: 1731

been obvious to one of ordinary skill in the art at the time the invention was made to combine the plug-space-plug filter of Arterbery with the filter containing flavored hollow fibers as it is known to provide different plugs differing in characteristics (column 1, lines 24-26). Accordingly, claim 21 is rejected.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arterbery et al (U.S. Patent No. 5,746,230) in view of Clarke et al (U.S. Patent No. 6,422,244). Regarding claim 1, Arterbery teaches a cigarette comprising a tobacco rod and a filter element connected to the tobacco rod, said filter element having an end proximal to the tobacco rod and an end distal from the tobacco rod, wherein said filter element comprises a first longitudinal extending section of the filter material positioned at the end of the filter element proximal to the tobacco rod; a second longitudinally extending section of filter material positioned at the end of the filter element distal from the tobacco rod and spaced apart from said first section of filter material, the two sections of filter material defining a compartment therebetween; and an adsorbent material, i.e. charcoal, contained within at least a portion of said compartment (column 1, lines 21-24). Arterbery fails to teach that at least one channel extends through said first section of filter material, said channel being adapted for passage of mainstream smoke between said tobacco and said compartment. However, Clarke teaches the at least one channel extending through said first section of filter material, said channel being adapted for passage of mainstream smoke between said tobacco rod and said compartment (column 2, lines 43-51 and column 3, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine

Art Unit: 1731

the plug-space-plug filter of Arterbery with the filter of Clarke that includes ventilating passages in order to deliver a diluted smoke stream to the mouth of the smoker (column 2, lines 59-61). Accordingly, claim 1 is rejected.

Regarding claim 3, Clarke teaches at least one channel comprises a plurality of channels (Figs. 1 and 2). Accordingly, claim 3 is rejected.

Regarding claim 4, Clarke teaches the plurality of channels are spaced along the periphery of first section of said filter material (Figs. 1 and 2). Accordingly, claim 4 is rejected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Niederman (U.S. Patent No. 2,827,903); Hale (U.S. Patent No. 3,438,381); Chew (U.S. Patent No. 6,345,625).

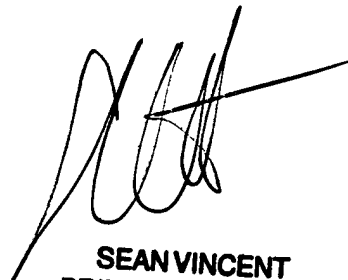
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carmen Lyles-Irving whose telephone number is (571) 272-2945. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLI
11/14/2005



SEAN VINCENT
PRIMARY EXAMINER